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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference IP03010	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/CN03/00229	International filing date (day/month/year) 28 March 2003 (28. 03. 03)	Priority date (day/month/year) 01 April 2002 (01.04.02)
International Patent Classification (IPC) or national classification and IPC IPC ⁷ A61B5/055		
Applicant SHENYANG NEUSOFT BOPU NMR TECH CO. , LTD ETAL		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 3 Sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and /or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of _____ Sheets.</p> <p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty ,inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2)with regard to novelty ,inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application.</p>		
Date of submission of the demand 28. March 2004 (28. 03. 03)	Date of completion of this report 27.July 2004 (27. 07. 04)	
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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/CN03/00229

I. Basis of the report

1. With regard to the elements of the international application:

☒ the international application as originally filed☐ the description:

Pages _____, as originally filed

Pages _____, filed with the demand

Pages _____, filed with the letter of _____

☐ the claims:

Nos _____, as originally file

Nos _____, as amended (together with any statement) under Article 19

Nos _____, filed with the demand

Nos _____, filed with the letter of _____

☐ the drawings:

sheets/fig _____, as originally filed

sheets/fig _____, filed with the demand

sheets/fig _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. with regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☐ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. ☐ The amendments have resulted in the cancellation of:☐ the description, pages _____☐ the claims No. _____☐ the drawings, sheets/fig _____5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement:

Novelty (N)

Claims	1~5	YES
Claims		NO

Inventive step (IS)

Claims	4	YES
Claims	1~3, 5	NO

Industrial applicability (IA)

Claims	1~5	YES
Claims		NO

2. Citations and explanations (Rule 70.7)

The subject matter of claims 1~5 are industrially applicable so that the requirement of PCT Article 33 (4) is met.

The solutions of claims 1~5 are not disclosed by the prior art in the search report, so they meet the requirements of PCT Article 33 (2).

A apparatus of nuclear magnetic resonance is disclosed in the document 1 (US, A, 6023165), which includes C-shaped yoke 72, electric magnets 71a, 71b are installed on the end of the legs 73, 74 of the yoke 72, a pole piece is each formed on the surface of electric magnets 71a, 71b (referring to the document 1, column 8, line 52 ~ column 9, line 6; figure 5B), the difference of claim 1 and the document 1 is that a disc for reducing vortex, a ring for realizing a homosphere of magnetic field, and a gradient coil are mounted on the head of the poles. A vortex eliminating device for medical nuclear magnetic resonance imaging is disclosed in the document 2 (CN, Y, 2481283), which includes a unit for eliminating vortex 802, and a ring for realizing a homosphere of magnetic field, the unit is between the head 17 of the device and the gradient coil (referring to the document 2, particularly figure 4), the document 1 and 2 relate to the same field, the person skilled in the art easily combine the document 1 and 2 to obtain the whole content of claim 1, so claim 1 does not meet the requirement of inventive step of PCT Article 33 (3).

The additional features of claims 2, 3 are disclosed in the document 2, so claims 2, 3 does not meet the requirement of inventive step of PCT Article 33 (4).

The additional features of the pole surface of lower vortex and lower magnetic hysteresis in the the nuclear magnetic resonance imaging of claim 5 are disclosed in the document 3 (CN, A, 1102971), the documents 1~3 relate to the same field, the person skilled in the art easily combine the documents 1~3 to obtain the whole content of claim 5, so claim 5 does not meet the requirement of inventive step of PCT Article 33 (3).

The additional features of claims 4 are not disclosed by any document of in the search report, so claim 4 meets the requirement of inventive step of PCT Article 33 (4).